

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Takashi YANAGISAWA et al.

Group Art Unit: 1745

Application No.: 10/098,522

Examiner: P. Lish

Filed: March 18, 2002

Docket No.: 112306

For: ELECTRODE MATERIAL FOR LITHIUM SECONDARY BATTERY, AND LITHIUM
SECONDARY BATTERY USING THE SAME

SUBMISSION OF DECLARATION UNDER 37 C.F.R. §1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Further to the Amendment filed on October 22, 2003, and in further reply to the
July 22, 2003 Office Action, submitted herewith is a Declaration under 37 C.F.R. §1.132 by
Mr. Takashi Yanagisawa. The Declaration explains why the process of Geus does not produce
carbon fibers having the structure set forth in claim 1 and why the carbon fibers of Geus do not
exhibit the cup shape or truncated conical tubular shape of the instant application.

Due consideration of the October 22, 2003 Amendment and the attached Declaration is
respectfully requested.

Respectfully submitted,

James A. Oliff
Registration No. 27,075

Julie M. Seaman
Registration No. 51,156

JAO:JMS/amw

Attachment:
Declaration under 37 C.F.R. §1.132

Date: January 6, 2004

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>



PS-6048745 1/2

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Takashi YANAGISAWA et al.

Group Art Unit: 1754

Application No.: 10/098,522

Examiner: P. Lish

Filed: March 18, 2002

Docket No.: 112306

For: ELECTRODE MATERIAL FOR LITHIUM SECONDARY BATTERY,
AND LITHIUM SECONDARY BATTERY USING THE SAME

DECLARATION UNDER 37 C.F.R. §1.132

I, Takashi Yanagisawa, a citizen of Japan, hereby declare and state:

1. I have been engaged in doctoral study for fibrous carbons at Shinshu University in Nagano, Japan since 2002.

2. I have been employed by GSI Creos Corporation since 1982 and I have had a total of 9 years of work and research experience in carbon materials and nano-structured carbon materials.

3. I am familiar with the above-identified application and the outstanding rejections therein.

4. The fibrous carbon taught by Gues is basically different from the Cup Stacked type Carbon Nano Fiber of the present invention. Specifically, the herringbone-type (fish-bone) carbon nanofiber exhibits no core or a small sized hollow core. Fibrous carbons have a common element, that is, synthesis from catalytic effect of transient metal particles. The fiber carbons taught by Geus are not circular and have no core or a small-sized hollow core. According to the model of herringbone nanofibers, this fiber exhibits rectangular cross-sectional

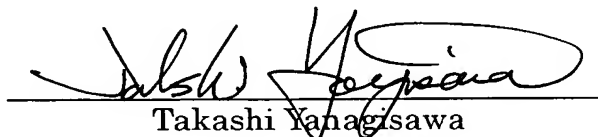
morphology. (See Rodriguez NM, Chambers A Baker RTK, Catalytic engineering of carbon nanostructures. Langmuir 1995; 11:3862-3866). In contrast, cup-stacked NF of the present invention exhibits a circular cross-sectional shape, and a large hollow core (without internal bridge). Tibbetts explains why fibrous carbon exhibit tubular morphology. See Tibbetts GG, *Why are carbon filaments tubular?* Journal of Crystal Growth 1984; 66:632-638.

5. In summary, the main differences between cupstacked NF and herringbone-type NF include:

Sample	Cross section	Hollow core
Cup-stacked NF	Circular	Very large without internal bridge
Herringbone NF	Rectangular	No core or small sized hollow core

6. I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and/or imprisonment under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing therefrom.

Date: Dec. 16, 2003


Takashi Yanagisawa